ABSTRACT OF THE DISCLOSURE

Though it is necessary to enhance sensitivity in detecting defects as design rules grow finer, the resolution of a conventional optical system is not sufficient to cope with it. In order to increase vertical resolution, an optical system is so configured to perform detection by differential interference in which beams of light are sheared in two-dimensional directions in a plane perpendicular to an optical axis, thereby achieving zero-order light phase-difference detection. Further, the system is configured such that inconsistencies in brightness caused by thin-film interference, which appear as a noise component in a comparative inspection, are reduced by differential interference and dark-field illumination. Further, with respect to non-critical grains in metal wiring, the contrast of grains is reduced by bright-field/dark-field-combined illumination. The sensitivity in defect detection can be enhanced and highly sensitive inspection can be achieved even when detecting objects of various types and processes.